AMENDMENT TO THE CLAIMS

Please cancel claims 2, and 14-19.

Please amend the remaining claims as follows:

1. (Currently Amended) A method of contouring a surface of a slider for supporting a transducer relative to a data storage medium, the method comprising:

(a) applying a lithographic resist layer to the slider surface;

(b) exposing the resist layer through a single mask having a mask pattern defined by variation in an optical density through the mask, wherein the mask pattern comprises a masked portion having a first optical density, an unmasked portion having a second optical density that is lower than the first optical density and an intermediate portion positioned between the masked and unmasked portions and having a third optical density that is between the first and second optical densities, and wherein the resist layer is exposed in an exposure pattern corresponding to the mask pattern;

(c) removing portions of the resist layer as a function of the exposure pattern to produce a vertically contoured resist layer; and

(d) etching the slider surface through the vertically contoured resist layer during a single etching step to form a vertically contoured surface feature within the slider surface.

2. Canceled.

3. (Currently Amended) The method of claim [2] 1 wherein, in step (b), the third optical density varies linearly along the intermediate portion such that the resist layer is exposed to a

depth that varies linearly along a portion of the resist layer that corresponds to the intermediate portion of the mask.

4. (Currently Amended) The method of claim [2] 1 wherein, in step (b), the third optical density varies non-linearly along the intermediate portion such that the exposure pattern varies non-linearly along a portion of the resist layer that corresponds to the intermediate portion of the mask.

5. (Original) The method of claim 1 wherein, in step (b), the mask pattern comprises:

a central recess defining area having a first optical density;

first and second rail defining areas which have a second optical density that is different than the first optical density, are disposed about the central recess defining area and have respective leading edges; and

a leading taper defining area positioned along the leading edges of the first and second rail defining areas, which has a third optical density that is between the first and second optical densities and progressively increases or decreases in a direction from the leading edges toward a leading edge of the mask pattern that corresponds to a leading edge of the slider.

6. (Original) The method of claim 5 wherein the third optical density progressively varies such that the etching step (d) forms a vertically contoured leading taper surface in the slider along leading edges of first and second side rails formed in the slider and corresponding to the first and second rail defining areas of the mask and wherein the leading taper surface has an angle of 0.2 degrees to 0.5 degrees relative to the first and second side rails.

7. (Original) The method of claim 1 wherein, in step (b), the mask pattern comprises:

a central recess defining area having a first optical density;

first and second rail defining areas which have a second optical density that is different than the first optical density, are disposed about the central recess defining area and have respective inside edges along the central recess defining area; and

first and second edge taper defining areas positioned along the inside edges of the first and second rail defining areas, respectively, which have a third optical density that is between the first and second optical densities and progressively increases or decreases in a direction from the inside edges toward the central recess defining area.

8. (Original) The method of claim 7 wherein the third optical density progressively varies such that the etching step (d) forms first and second vertically contoured edge taper surfaces in the slider along inside edges of opposing first and second side rails formed in the slider and corresponding to the first and second rail defining areas of the mask and wherein the first and second edge taper surfaces have angles of 0.2 degrees to 45 degrees relative to the first and second side rails.

9. (Original) The method of claim 1 wherein, in step (b), the mask pattern further comprises:

a central recess defining area having a first optical density;

first and second rail defining areas which are disposed about the central recess defining area and have a

second optical density that is different than the first optical density;

a third rail defining area which is positioned between the first and second rail defining areas, has a leading edge that trails a portion of the recessed cavity defining area and has the second optical density; and

a leading taper defining area which is positioned along the leading edge of the third rail defining area and has a third optical density that is between the first and second optical densities and progressively increases or decreases in a direction from the leading edge toward the portion of the central recess defining area.

10. (Original) The method of claim 9 wherein the third optical density progressively varies such that the etching step (d) forms a vertically contoured leading taper surface in the slider along a leading edge of a center rail formed in the slider and corresponding to the third rail defining area of the mask and wherein the leading taper surface has an angle of 0.2 degrees to 0.5 degrees relative to the center rail.

11. (Original) The method of claim 9 wherein, in step (b), the third rail defining area further comprises:

first and second side edges extending along the central recess from the leading edge toward a trailing edge of the third rail defining area; and

first and second edge taper defining areas positioned along the first and second side edges, respectively, which have a fourth optical density that is between the first and second optical densities and progressively increases or decreases in a direction from the first and second side edges toward the central recess defining area.

12. (Original) The method of claim 11 wherein the third optical density progressively varies such that the etching step (d) forms first and second vertically contoured edge taper surfaces in the slider along side edges of a center rail formed in the slider and corresponding to the third rail defining area of the mask and wherein the first and second edge taper surfaces have angles of 0.2 degrees to 45 degrees relative to the center rail.

13. (Original) A disc head slider that is contoured according to the method of claim 1.

14-19. Canceled.

20. (Currently Amended) A slider fabrication apparatus comprising:

a slider having a bearing surface with a resist layer formed thereon; and

lithographic mask means for exposing the resist layer as a function of a pattern defined by an optical density through the lithographic mask means and for creating a progressively [increasing or decreasing] varying exposure level along at least one portion of the resist layer, wherein the lithographic mask means comprises a masked portion having a first optical density, an unmasked portion having a second optical density that is lower than the first optical density and an intermediate portion positioned between the masked and unmasked portions and having a third optical density that is between the first and second optical densities.